

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): An image reader for reading an image recorded on an original, comprising:
a light source for emitting a light toward said original;
an imaging device for receiving the light emitted from said light source and having
passed through said original; and

light-amount regulating means for regulating a light amount of said light source, said
light-amount regulating means setting an electric-current value of said light source so as to make
an output value of said imaging device converge within a predetermined range,

wherein the electric-current value of said light source used when reading said image is
identical with said electric-current value set by said light-amount regulating means.

2. (original): An image reader according to claim 1, wherein said light source includes a
plurality of light emitting elements for emitting the lights of red, green, blue and infrared, and the
light amount of said light source is regulated with respect to the light emitting elements of each
color.

3. (original): An image reader according to claim 2, wherein said light amount is
regulated by utilizing binary search.

4. (original): An image reader according to claim 3, wherein a charge storage time of said imaging device is fixed when regulating said light amount, said charge storage time being set so as to be shorter in an order of the red light, the green light, and the blue light.

5. (original): An image reader according to claim 3, wherein a charge storage time of said imaging device is fixed when regulating said light amount, said charge storage time being set so as to be shorter in an order of the infrared light, the red light, the green light, and the blue light.

6. (original): An image reader according to claim 1, wherein two kinds of scanning are performed when reading said image, one of which is pre-scanning for preliminarily reading said image and the other of which is fine scanning for reading said image under a read condition determined in accordance with said pre-scanning, adjacent pixels of said imaging device being grouped in said pre-scanning to reduce a pixel reading number in comparison with said fine scanning, and said light amount being regulated on the basis of a readout result of said pre-scanning.

7. (original): An image reader according to claim 1, wherein two kinds of scanning are performed when reading said image, one of which is pre-scanning for preliminarily reading said image and the other of which is fine scanning for reading said image under a read condition determined in accordance with said pre-scanning, adjacent pixels of said imaging device being thinned in said pre-scanning to reduce a pixel reading number in comparison with said fine scanning, and said light amount being regulated on the basis of a readout result of said pre-scanning.

8. (original): An image reader according to claim 3, wherein only the electric-current value of the light emitting elements emitting the infrared light is set to a constant value.

9. (original): An image reader according to claim 2, wherein the light amount of said light source is also regulated when adjusting a position of said original, at this time, the electric-current value of said light source being set separately from said electric-current value for reading said image.

10. (original): An image reader according to claim 9, wherein said light emitting elements of one of the red light, the green light, and the blue light are turned on when adjusting the position of said original.

11. (original): An image reader according to claim 9, wherein said light emitting elements of all of the red light, the green light, and the blue light are turned on when adjusting the position of said original.

12. (original): An image reader according to claim 2, wherein said light emitting element is a light emitting diode.

13. (original): An image reader according to claim 12, wherein said light emitting diodes are arranged in matrix.

14. (original): An image reader according to claim 1, wherein said light source is an electroluminescence element, a coloring layer of which includes the respective coloring layers of red, green, and blue.

15. (original): An image reader according to claim 14, wherein said coloring layers of red, green, and blue are arranged in matrix.

16. (original): An image reader according to claim 1, wherein said light source comprises an electroluminescence element, which emits a white light, and filters of red, green, and blue disposed between said electroluminescence element and said original.

17. (original): An image reader according to claim 1, wherein said imaging device is an area CCD.

18. (original): An image reader according to claim 1, wherein an error message is displayed when the light amount of said light emitting elements declines by a prescribed amount or more.

19. (original): An image reader according to claim 1, wherein said light-amount regulating means automatically regulates said light amount again when the light amount of said light emitting elements declines by a prescribed amount or more.

20. (original): An image reader according to claim 18 or 19, wherein the decline of said light amount is detected when said image reader is turned on.

21. (original): An image reader according to claim 18 or 19, wherein the decline of said light amount is detected when said image reader is turned off.

22. (previously presented): An image reader for reading an image recorded on an original, comprising:

a light source for emitting a light toward said original;
an imaging device for receiving the light emitted from said light source and having passed through said original; and

light-amount regulating means for regulating a light amount of said light source, said light-amount regulating means setting an electric-current value of said light source so as to make an output value of said imaging device converge within a predetermined range,

wherein said electric-current value of said light source is used when reading said image.

23. (new): An image reader according to claim 22, wherein said light-amount regulating means is further configured to:

store at least one electric-current set value of said light source and the predetermined range;

calculate a central value from said at least one electric-current set value;

compare the predetermined range with a first output value of said image device which is obtained using said central value;

use said central value when reading said image if the first output value converges the predetermined range; and

continue to calculate another central value from said at least one electric-current set value until another output value of said image device obtained using the other central value converges the predetermined range if the first output value does not converge the predetermined range, and use the other central value when reading said image, if the other output value converges the predetermined range.

24. (new): An image reader for reading an image recorded on an original, comprising:
a light source for emitting a light toward said original;
an imaging device for receiving the light emitted from said light source and having passed through said original; and

light-amount regulating means for regulating a light amount of said light source, said light-amount regulating means setting an electric-current value of said light source so as to make an output value of said imaging device converge within a predetermined range,

wherein the electric-current value of said light source used when reading said image is identical with said electric-current value set by said light-amount regulating means,

wherein said light source includes a plurality of light emitting elements for emitting the lights of red, green, blue and infrared, and the light amount of said light source is regulated with respect to the light emitting elements of each color,

wherein said light amount is regulated by utilizing binary search, and

wherein only the electric-current value of the light emitting elements emitting the infrared light is set to a constant value.